

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL

Area (59085Z) Walgreens Machine Id [Walgreens] 136A624323 Component

Diesel Engine

PETRO CANADA DURON SHP 10W30 (11 GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

Elevated aluminum (AI) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

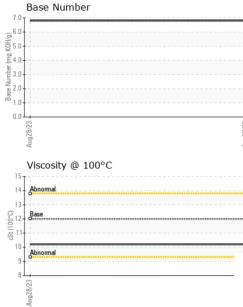
Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

AL)			· · · · · · · · · · · · · · · · · · ·	Aug2023		
SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0093629		
Sample Date		Client Info		28 Aug 2023		
Machine Age	mls	Client Info		37383		
Oil Age	mls	Client Info		37383		
Oil Changed		Client Info		Changed		
Sample Status				NORMAL		
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0		
Glycol		WC Method		NEG		
WEAR METAL	S	method	limit/base	current	history1	history2
ron	ppm	ASTM D5185m	>80	80		
Chromium	ppm	ASTM D5185m	>5	5		
Nickel	ppm	ASTM D5185m	>2	2		
Titanium	ppm	ASTM D5185m		- <1		
Silver	ppm	ASTM D5185m	>3	<1		
Aluminum	ppm	ASTM D5185m		94		
_ead	ppm	ASTM D5185m	>30	<1		
Copper	ppm	ASTM D5185m		252		
Tin	ppm	ASTM D5185m	>5	5		
/anadium	ppm	ASTM D5185m		0		
Cadmium	ppm	ASTM D5185m		0		
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	2	27		
Barium	ppm	ASTM D5185m	0	0		
Nolybdenum	ppm	ASTM D5185m	50	43		
Vanganese	ppm	ASTM D5185m	0	6		
Vagnesium	ppm	ASTM D5185m	950	544		
Calcium	ppm	ASTM D5185m	1050	1777		
Phosphorus	ppm	ASTM D5185m	995	730		
Zinc	ppm	ASTM D5185m	1180	886		
Sulfur	ppm	ASTM D5185m	2600	2186		
CONTAMINAN	ITS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>20	9		
Sodium	ppm	ASTM D5185m		8		
Potassium	ppm	ASTM D5185m	>20	269		
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	0.9		
Nitration	Abs/cm	*ASTM D7624	>20	11.5		
			. 20	00.5		
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.5		
			>30 limit/base	23.5 current	history1	history2
Sulfation						



OIL ANALYSIS REPORT



		VISUAL		method	limit/base	current	history1	history2
		White Metal	scalar	*Visual	NONE	NONE		
		Yellow Metal	scalar	*Visual	NONE	NONE		
		Precipitate	scalar	*Visual	NONE	NONE		
		Silt	scalar	*Visual	NONE	NONE		
		Debris	scalar	*Visual	NONE	NONE		
		Sand/Dirt	scalar	*Visual	NONE	NONE		
	Aug28/23	Appearance	scalar	*Visual	NORML	NORML		
	Aug	Odor	scalar	*Visual	NORML	NORML		
		Emulsified Water	scalar	*Visual	>0.2	NEG		
		Free Water	scalar	*Visual		NEG		
		FLUID PROP	ERTIES	method	limit/base	current	history1	history2
		Visc @ 100°C	cSt	ASTM D445	12.00	10.2		
		GRAPHS						
		Ferrous Alloys						
		⁸⁰						
		/0						
		60 - nickel						
		50- E 40						
		튭 40 -						
		30-						
		20 -						
		10						
		0 2 2			53			
		Aug28/23			Aug28/23			
					Au			
		Non-ferrous Met	als					
		copper						
		250 - tin						
		250						
	ε	200						
	uuu u	tin						
		200						
		200 tin 150						
		200 tin 100						
		2000 E 150 100 50 0 0 0 0 0 0 0 0 0 0 0 0 0						
	MAN	2000 E 150 100 50 0 0 0 0 0 0 0 0 0 0 0 0 0						
		2000 1000 500 0 0 0 0 0 0 0 0 0 0 0 0			Aug28/23			
		2000 E 150 100 50 0 0 0 0 0 0 0 0 0 0 0 0 0			Aug28/23	Base Number		
		200 100 50 Viscosity @ 100 ⁶				Base Number		
		200 100 50 Viscosity @ 100 151			7.0- 6.0-	Base Number		
		200 200 200 100 50 Viscosity @ 100 ⁶ 15 14 Abnomal 13			7.0- 6.0-	Base Number		
		200 200 200 100 50 Viscosity @ 100 ⁶ 15 14 Abnomal 13			7.0- 6.0-	Base Number		
		200 200 100 50 50 50 50 50 50 50 50 50			7.0- 6.0-	Base Number		
		200 200 100 50 Viscosity @ 100 100 50 Viscosity @ 100 112 Base 112 112 100 100 100 100 100 100			Aug28/23	Base Number		
		200 200 100 50 50 50 50 50 50 50 50 50			7.0- 6.0-	Base Number		
		200 200 100 50 Viscosity @ 1000 100 100 100 100 100 50 Viscosity @ 1000 100 100 100 100 100 100 100			CZ282Dhrv 7.0 (0,0 HOX Bu) 4.0 888 2.0 1.0 0.0			
		200 200 100 50 Viscosity @ 1000 100 100 100 100 100 50 Viscosity @ 1000 100 100 100 100 100 100 100			CZ282Dhrv 7.0 (0,0 HOX Bu) 4.0 888 2.0 1.0 0.0			
		200 200 100 50 Viscosity @ 1000 100 100 100 100 100 100 100			7.0 6.0 (0)HOX BUIJ Store HOX BUIJ Store S	Base Number		
Sar Lab	poratory mple No. o Number que Number	200 200 100 50 Viscosity @ 1000 50 Viscosity @ 1000 50 112 Base 200 100 50 112 Base 200 100 100 100 100 100 100 100	°C	son Ave., Ca d : 13 3 ed : 18 3	7.0 6.0 6.0 900 Koll(0) 800 Ko	Aug28/23	Ba	Chrisphalt Driv th Borough, P US 1801
INGLASSING LASS INGLASSING INGLASSIN INGLASSIN ING	poratory mple No. o Number que Number st Package	200 200 200 50 50 50 50 50 50 50 50 50	2 501 Madi Receiver Diagnos Diagnos	son Ave., Ca d : 13 S ed : 18 S tician : Jon	ry, NC 27513 Sep 2023 athan Hester	Aug28/23	6813 (Ba Contact: S	Berkeley-Nazare Chrisphalt Driv th Borough, F US 1801 tephen Macke
ificate L2367 Tes discuss this sam	poratory mple No. o Number que Number st Package mple report, o	200 200 100 50 Viscosity @ 1000 50 Viscosity @ 1000 50 112 Base 200 100 50 112 Base 200 100 100 100 100 100 100 100	- 501 Madii Received Diagnos Diagnost	son Ave., Ca d : 13 9 ed : 18 9 tician : Jon	ry, NC 27513 Sep 2023 athan Hester	Aug28/23	6813 (Ba Contact: S smackes@t	Berkeley-Nazare Chrisphalt Driv th Borough, F US 180 ⁻



Contact/Location: Stephen Mackes - TSV1365